DOCUMENT RESUME

ED 195 003 EA 013 079

AUTHOR Haddad, Wadi D.
TITLE Educational and Economic Effects of Promotion and Repetition Practices. Staff Working Paper No. 319.
INSTITUTION World Bank, Washington, D. C.
PUB DATE Mar 79
NOTE 61p.

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Academic Achievement: Academic Failure: Achievement Need: Developing Nations: Educational Economics: Elementary Education: Foreign Countries: *Grade Repetition: Instructional Program Divisions: Low Achievement: Motivation: Self Esteem: Socioeconomic Status: *Student Promotion

ABSTRACT

The education dollar is poorly spent when students drop out of school, and even more poorly spent when students repeat grades. A review of the research on student promotion and grade repetition discloses two basic philosophies underpinning practices in this area. Those arguing for grade repetition assume that academic factors determine success and failure, that tests measuring student achievement are reliable, that some skills are best taught at particular levels, and that students are emotionally better off if they are placed with children at similar developmental levels. The research, however, supports those arguing for automatic promotion. The determinants of achievement are not primarily academic, nor are all desirable educational outcomes cognitive or objectively measurable. Grade retention actually decreases achievement and can be devastating to students' self-concepts, while promotion aids the total development of the child in both cognitive and affective areas. The real issue is prevention of failure, suggesting that a nongraded curriculum, ability grouping, and a new role for educational measurement should be aspects of a program that could solve both the educational and the economic problems associated with the division of schools into year-long grades. A bibliography of 96 relevant items accompanies this report. (Author/PGD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED195003

The views and interpretations in this document are those of the author and should not be attributed to the World Bank, to its affiliated organizations, or to any individual acting in their behalf.

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

WORLD BANK

Staff Working Paper No. 319

March 1979

EDUCATIONAL AND ECONOMIC EFFECTS OF PROMOTION AND REPETITION PRACTICES

This paper presents policies, practices and problems of student flow, and related research findings to the questions: What are the determinants of achievement and their implications for promotion practices? How valid are the criteria used in promotion decisions? What are the comparative effects of promotion practices on the achievement and personality of pupils? What are the other educational options to deal with failure and low achievement?

On the basis of the studies reviewed, it was concluded that (a) the dynamics of success and failure can best be represented by a multidimensional interactive matrix of school-related and out-of-school variables; (b) promotion decisions are based on unreliable measures of academic performance and ignore affective and social goals of education; (c) there is no evidence that repetition is more effective than promotion, or that repetition practices improve academic standards and class homogeneity; and (d) grade retention has certain negative effects on a pupil's self-concept and attitude.

Although promotion seems to be more desirable than retention, the real issue is that of prevention of failure. Consequently an educational strategy is suggested, the basic elements of which are a nongraded curriculum, ability grouping and a new role for educational measurement.

Prepared by: Wadi D. Haddad
Education Department
Central Projects Staff

Copyright © 1979
The World Bank
1818 H Street, N.W.
Washington, D.C. 20433 U.S.A.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J. E. Merriam

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EA013079

TABLE OF CONTENTS

	Page
Scope of the Problem	1
Policies and Practices	5
The Two Sides of the Issue	8
Purpose of the Review	10
Factors Affecting Achievement and Failure	11
Criteria for Promotion	16
Comparative Effects of Promotion Practices on Achievement	19
Comparative Effects of Promotion Practices on Personal - Social Adjustment	25
Conclusion and Educational Implications	28
Economic Implications	35
Annexes	
I. Rate of Repetition for Selected Countries	37
II. Causes of Non-Promotion	40
III. Comprehensive Simulation	43
Bibliography	46

EDUCATIONAL AND ECONOMIC EFFECTS OF PROMOTION AND REPETITION PRACTICES*

Scope of the Problem

1. Wastage in the flow of a cohort of students in an educational system is expressed quantitatively in terms of dropout and repetition. Dropout is considered wasteful because of the investment of educational services and economic resources in pupils who fail to complete a cycle, particularly those who drop out before the minimum for permanent literacy is achieved. It also contributes to under-utilization of physical facilities as a result of a decrease in class size in successive grades within a cycle. Repetition is regarded as wasteful since repeaters stay in school longer than the normal duration and thus reduce the intake capacity of the corresponding grades and increase the education unit costs.

2. Of the two components of educational wastage, repetition has the greater impact for a number of reasons: (a) Dropout may not be completely wasteful if it is considered as an intermediary output with incremental benefits in the socialization and mental development of dropouts; (b) Repetition contributes more to the economic inefficiency of an educational system (para. 42). A study of repetition and dropout in primary education in 21 countries by Brown (1966) followed by a report by the UNESCO Regional Office for Education in Asia (1967) concluded that, in countries with high wastage ratios, repetition contributes to wastage more than does dropout; (c) Repetition affects dropout. The Bangkok Report cited above concludes that repetition is followed by dropout. In an analysis of the determinants of primary school dropouts in 42 less developed countries

---

* Research and documentation assistance was provided by Helen Adi and Francisco Ruiz.

of Africa, Asia, Latin America and the Middle East, it was found that "the only educational variable significantly related to the dropout rate is the average rate of repetition. A one percent increase in the average repetition rate is associated with an almost one percent increase in the cumulative dropout rate." (Levy, 1971). The dropout rates were calculated net of repeaters so that the two variables do not measure the same phenomenon. The study concludes that in the short run the most effective way to reduce dropout rates is the elimination or reduction of repetition. Likewise, Schiefelbein (1975) shows that the "root cause of low retention in primary education is repetition". Thomas and Knudsen (1965) reviewed the related literature and concluded that non-promotion in the early years of schooling leads to later withdrawal from the educational system. Furthermore, repeating a grade did not seem to help the child in mastering the academic skills of that grade level. On the contrary, the anxiety about the child's academic failure, which is usually expressed by parental pressure, creates at many times problems of social and personal maladjustments. The retained child starts eventually to seek some recognition in areas that do not require academic performance, and this in turn increases the likelihood of having the retained child drop out of school. Thus, when school administrators characterize a given student as a school failure, they are directing that student out of the education system, and consequently they are adding to the educational wastage. Both Kitch (1952) and Ellinger (1965) also reported research evidence supporting the above results. Similarly, Stroup and Robins (1972), investigating elementary school predictors of high school dropout among male students, found that school retardation at the primary level is one of such predictors.

3. Developing countries suffer from high repetition rates, the extent of which appears in Annex 1 which gives the rates for the first six grades in a selected number of countries grouped by region. The range and mean of repetition rates for each group of countries are shown in Table 1.

Table 1

Repetition Rates (%)

Region	First Grade		Last Grade	
	Range	Mean	Range	Mean
East Africa	1-27	15.5	1-39	14.1
West Africa	5-50	23.7	1-57	34.1
Asia	14-74	29.0	2-27	8.7
Europe, M.E., and N. Africa (EMENA)	6-23	12.4	1-41	12.3
Latin America and Caribbean	15-33	21.4	2-14	5.5

Although no comparative inferences can be made due to the selectivity of countries and variation in data dates, one can observe the wide range of percentage repeaters, and the high rates that tend to decrease toward the end of the cycle with the exception of West African and EMENA countries. These results show the extent to which repetition is a limiting factor to educational opportunities. UNESCO, in its report to the 36th International Conference on Education (1977), points out on the basis of repetition data covering 68 percent of primary school enrollment in Africa, 78 percent in South Asia and 94 percent in Latin America, that in 1970 "repeaters constituted about 15 percent of total enrollment in primary education in Latin America, 15 percent in Africa and 18 percent in South Asia. In other words, the number of children of primary school age admitted to school could have been increased by some 15-20 percent this year in LDR, without increasing the costs, had there been no repetition."

4. The magnitude of the impact of repetition on school output, and consequently efficiency, has been demonstrated in a number of studies. The effect is compounded by the phenomenon of multi-repetition by the same student within a certain cycle. IBE (1972) reported a number of studies that retraced the school career of pupils that completed the primary cycle, i.e., excluding dropouts. The data reported in these studies were utilized in this paper to calculate the average number of years spent by a primary school completer and consequently an inefficiency index defined as:

$$I = \frac{\sum_{i=n}^{a} P_i \cdot i}{n}$$

where n denotes the formal duration of an educational cycle, i number of years spent to complete a cycle and P_i the proportion of pupils spending i years in a cycle. The index of inefficiency was 1.2 for Chad, Ivory Coast and Niger (boys); 1.3 for Togo (boys) and Congo; and 1.4 for the Central African Republic. A similar study in Lebanon by Antoun and Abu-Rujeili (1975) showed an index of inefficiency of 1.12. Such inefficiency due to repetition and the closely-related factor of dropout contributes to the high cost of the educational systems, especially in countries where financial resources are very limited. The results of the 1969 educational wastage survey by Office of Statistics at UNESCO, as quoted by IBE (1971) showed input/output ratios for countries in major regions as follows:

Africa	2.00
Latin America	1.90
Asia	1.31
Europe	1.20

"The above ratios shows that, in Africa for instance, the median 'cost' to the system per successful completer was double the prescribed one. In other words, only half of the cost was effective, since repetition and dropout were responsible for the other half." Schiefelbein (1973) also estimated the total amount of resources devoted to repeaters in the first grade in Latin America to be more than $300 million per year. "Just a fraction of this amount is more than all the foreign aid devoted to education in Latin America."

5. Repetition seems to have also a regressive effect on equity in the educational system. This is seen from the socio-economic profiles of repeaters. Studies by Buckman (1971) and Fischer (1971) clearly show that the failure to promote students at a normal pace has the greatest effect on students from low socio-economic levels. In addition an IBE survey showed that the rate of repetition in six countries was significantly higher in rural than urban areas (IBE, 1971).

Policies and Practices

6. There are two major rubrics under which policies regarding dynamics of student flow fall: repetition (retention), and automatic promotion. However, the application of components of such policies generates a wide spectrum of diversified systems. Countries that systematically practice repetition differ in terms of (a) criteria used for promotion, (b) the person or body that is responsible for deciding on promotion, (c) the control of the number of years that a pupil is permitted to be retained in a particular grade, and (d) the academic treatment given to repeaters. Similarly, application of automatic promotion varies in terms of scope, justification and remedial work that accompanies it.

Table 2

Automatic Promotion: Regions and Selected Countries

Region or Country	De jure Automatic Promotion from Primary Grades	De facto Automatic Promotion from Primary Grades
Africa		
Kenya	all	
Nigeria	all	
Sudan	1 & 2	
Tanzania		all
Zambia		all
Asia		
Republic of China	all	
Japan	all	
Korea	all	
Malaysia	all	
Singapore		1 & 2
Europe		
Austria	1	
Federal Republic of Germany	1	
Belgium	1 & 2	
Denmark	all	
Norway	all	
Sweden	all	
United Kingdom	all	
U.S.S.R.		all
Middle East and N. Africa		
Bahrain	1,2,3,	
Egypt	1,2,5	
Jordan		1,2
Morocco	6	
Turkey	1,2,3,	
Latin America		
Brazil (some States)	all	
Costa Rica	1,4,	
Ecuador	1,3,5	
Venezuela	1,2,3,6	
North America Some States	all	
Some States		all
Oceania	all	

7. While the majority of countries practice systematic repetition, automatic promotion has been introduced de jure in a number of countries through government legislation, and de facto in some others where teachers have been increasingly expected to reduce the number of repeaters. For example, according to a study conducted by the Lawyers' Committee for Civil Rights Under Law (1974) only 12 States in the U.S. had promotion requirements set in statutes and/or regulations. Of these 12 States only 6 adopted quantifiable criteria for promotion, such as minimum school attendance, passing standardized tests, or other specific requirements. For instance, in Alabama "a pupil is promoted if he has progressed within the limits of his ability," and in Hawaii promotion is based on "performance in relation to a pupil's ability." The extent to which automatic promotion has been de jure or de facto introduced in primary education in developed and developing countries is expressed in Table II on the basis of recent data available from the UNESCO Office of Statistics. It is expected that more countries will reassess their retention policies in light of increasing discussions of this issue in international meetings and reports, such as the annual UNESCO International Conference of Education. The report of the Third Regional Conference of Ministers of Education and Economic Planning in the Arab States reaffirmed in 1970 the recommendation of previous regional educational conferences concerning the prohibition of repetition in the first four years of primary education accompanied by measures to ensure the continuity of the pupil's progress (Phillips, 1975).

The Two Sides of the Issue

8. The concept of grade retention or nonpromotion is based on pedagogical assumptions concerning the determinants and outcomes of school learning. It is assumed, first of all, that the determinants of achievement and failure are basically academic. A study program can be feasibly expressed in the form of one-year courses that take one year to teach and one year to be learned by pupils who have already mastered the previous course. The majority of the pupils in a given grade are developmentally capable of learning the required material at the minimal rate while the teacher goes through the syllabus (IBE, 1971). Therefore, failure of pupils to achieve at the required level can be considered as a function of the time spent in assimilating the school experiences. Secondly, it is assumed that a teacher or examiner uses measurement instruments and techniques that are valid and reliable enough to accurately determine a pupil's level of knowledge in comparison with the required level needed to proceed to the next grade level. It is, thirdly, assumed that certain concepts and skills can best be learned at a given grade, and a pupil who fails to learn them needs to repeat the year's work in its entirety. Moreover, not all children mature at the same rate, and children that mature slowly can profit by being given an extra year to grow (Thompson, 1976). It is finally assumed that children are emotionally better off if they are retained since continued inability to do the work at a certain level is discouraging and frustrating. Similarly, immature children will find more suitable classmates when they repeat a grade. (Jackson, 1975).

9. Proponents of repetition criticize automatic promotion on the grounds that such a policy (a) destroys incentives to learn and teach, (b) ignores individual differences, (c) lowers achievement standards of

a class, and (d) leads to maladjustment of students because it fails to provide the social concepts necessary for adequate participation within a group (Smith, 1963). Meanwhile, it is claimed that a strict retention policy raises scholastic standards, and pupil achievement, and at the same time reduces the ability range with which the teacher has to deal within a particular grade level.

10. On the other hand, a policy of promotion as a better alternative starts with a rejection of the pedagogical assumptions on which a repetition policy is based. In other words, (a) the determinants of achievement are not totally academic, and the desirable educational outcomes are not only cognitive; (b) the criteria for the measurement of educational outcomes are debatable and chronological age seems to be "the best single criterion for determining the placement of a child with other children"; (c) repetition does not improve the achievement of the low-achiever, nor does it reduce the range of abilities, since each grade will carry the retained into the next year as a source of a difference in ability; and (d) grade retention is devastating to the pupil's adjustment and self-concept. (Jackson, 1975). On the other hand, it is claimed (Goodlad, 1952) that promotion provides a better treatment for the total development of the child in both the cognitive processes (knowledge, understanding, application, analysis, etc....), and the affective domain (attitudes, emotions, values, etc....)

Purpose of the Review

11. The purpose of this review is to determine, as far as available research results permit, the validity of the assumptions on which the two major promotion practices are based and the effect of these practices on the educational outcomes. Specifically, the study attempts to answer (with special emphasis on the first cycle of education) the following questions:

(a) What are the determinants of achievement and their implications for promotion practices?

(b) How valid are the criteria used in promotion decisions?

(c) What are the comparative effects of the different promotion policies on achievement?

(d) What are the comparative effects on the pupil's personality?

(e) What are the economic implications?

(f) What are the other educational options that may be effective in dealing with low achievement and failure?

The procedure included a computer search of ERIC, a wide utilization of the Education Index and other reference documents, a survey of previous reviews, and a study of policy and statistical publications. Most of the relevant research was found to be, as expected, related to the U.S. and other developed countries, although special efforts were made to locate research studies pertaining to developing countries. The significance of the review transcends these geographic imbalances in the data base, because of the generality of the conceptual issues investigated and the relative transferability of the results of the controlled experiments. Further research is, however, needed to test the applicability of the conclusions to diverse settings in developing countries.

Factors Affecting Achievement and Failure

12. Promotion policies presume a definition of success and failure mainly in terms of cognitive achievement, assuming that such an achievement is a good predictor of further scholastic success and perhaps of later life success. Recent evidence raises serious questions regarding the narrowness of this approach as it indicates a low correlation between cognitive achievement and later life success (Cohn, 1968 and Holtzman, 1971), and a strong influence of noncognitive achievement on later productivity (Gintis, 1971). Along the same lines, McClelland (1973) reports that "researchers have in fact had great difficulty demonstrating that grades in school are related to any other behaviors of importance", and that a committee of the Social Science Research Council which he was chairing "concluded that while grade level attained seemed related to future measures of success in life, performance within a grade was related only slightly". Berg (1970) also summarized studies showing that neither amount of education nor grades in school are related to vocational success in a number of jobs.

13. Even when success is conceived in terms of achievement, two major questions remain to be asked: (a) What are the factors that affect achievement and, consequently, relate to the causes of failure? and (b) Are promotion practices relevant to these factors? A review of research concerned with cognitive and noncognitive factors (Asbury, 1974) indicated clearly that achievement is influenced by noncognitive variables such as socio-economic status, child rearing, family size and education of parents, as much as by cognitive variables such as intelligence and cognitive environment. Alexander and Simmons (1975) attempted to identify schooling inputs that have a significant impact on cognitive achievement of students in developing countries by

reviewing a number of research projects and using the educational production function (EPF) as an analytical tool for this purpose. They reported that "schooling inputs do have an effect on academic achievement, although, for many school-related variables tested, it is either weak or statistically insignificant. Furthermore, the impact of any significant policy-controlled schooling variables will almost certainly be very small in relation to the other determinants of student performance, such as home background and individual personality." The most extensive study to identify determinants of achievement was conducted by The International Association for the Evaluation of Educational Achievement. Achievement in science (Comber and Keeves, 1973) and reading (Thorndike, 1973) by ten-year-old pupils are considered here. The magnitude of the effect of different variables shown by their contribution to the explanation of total variance of achievement scores varies with subjects and countries. While the contribution of home circumstances and background is about 14 percent in reading, it is about 10 percent in science. In contrast, although the explanatory power of the learning conditions is relatively small, its value for science (8 percent) is twice that for reading (4 percent). Similarly, in developing countries there is a relatively greater role of schooling variables and smaller role of home background than in developed countries. Averch et al. (1974) after a critical review of input-output studies concluded the following:

> "When we examine the results across studies we find that school resources are not consistently important. The particular resources that seem to be significant in one study do not prove to be significant in other studies that include the same resources in the analysis.

Background factors, on the other hand, are always important. In study after study a student's background has a strong influence on his educational outcomes. Furthermore, the results are consistent across studies. The socio-economic status of a student's family - his parents' income, education, and occupation - invariably proves to be a significant predictor of his educational outcome."

14. In a more specific manner, a number of studies dealt directly with the factors affecting failure and/or repetition. Causes of repetition in the lower primary grades were investigated in a study conducted in a semi-rural semi-urban region in France in 1970 and reported by IBE (1971). Two kinds of causes were identified, material and psychological, as detailed below:

Material causes		Percent
Repetition due to:	Overcrowded classes	17.8
	Lack of preparatory year	10.0
	Absence from school (14 days to 2 months); an overburdened teacher being unable to help pupils catch up	27.0
	Too many changes from one school to another	14.2
	Too many changes of teacher within the same school	20.2
	(Certain categories overlap)	
Psychological causes		
Repetition due to:	The fact that a pupil with too low an IQ was not placed in a special school at the start	31.0
	The pupil coming from an immigrant family	18.8
	The family background	16.8
	Fatigue and various other factors	14.6

Saunders also lists the causes of nonpromotion of elementary school children reported in various research studies (Annex II). They include insufficient achievement or attendance, imperfect health, emotional instability, out-of-school causes and inappropriate administrative practices.

15. Some studies have shown that there are social factors that are not inherent in the genetic or psychological structure of the pupil, that affect low achievement which may lead to failure and repetition. Chowdhury (1965) in a study of dropout and repetition in a district of West Bengal, ascribes inefficiency to economic factors and parental indifference. Crescimbeni (1964) investigated the effects of broken homes on academic achievement in a community of about 50,000 in Connecticut, and found that broken homes have a negative effect on achievement. Similar results were reported by Knudsen (1964) where a positive relationship between marital conflict of parents and nonpromotion in primary school is suggested. Clark (1959) also reported that broken homes had the highest proportion of non-promoted students. Knudsen and Thomas (1965) after reviewing the literature stressed the importance of social factors particularly the home environment. They go further to conclude that "an upgrading of thinking and actions that will regard ability as a flexible, plastic dimension, subject to modifications by such social factors, will lead to both greater flexibility and equality of opportunity for each student."

16. Psychological factors were also reported to be associated with school failure. Studies by Bassi (1965), Kaiser (1966), Kirchoff (1965), Stienlet (1964), Geller (1965) and Gutierrez (1965) that were reported in the IBE survey (1971) revealed that the child's sense of security and his early experiences of success and failure are frequently found to be related to low achievement, repetition and dropout.

17. The relationship between failure and the teaching-learning environment was also the subject of some studies. Kowitz and Armstrong (1961) presented evidence to show that school policy has a material effect on

achievement of its students. A Polish author, Kupisiewicz (IBE, 1971), analyzed factors in the organization, content and methodology of education which may cause failure, and concluded that "a large proportion of dropout and repetition could be avoided if teachers had a better knowledge of the techniques of educational science and paid more attention to the pupils' personalities and to maintaining individual contacts with them." McClelland (1972) investigated the hypothesis that unmotivated children are low achievers and indicated that achievement motivation training improved the academic performance of students. Similarly, Glasser (1969) concluded that the key to school success is motivation through involvement, on the basis of which he established the system of Schools Without Failure (SWF). Steadman (1959) submitted the records of 15 once-retained children to a panel of eight judges to evaluate their promotion-retention status, and all judges agreed that these children had a short attention span. School non-attendance has also been shown to be related to poor achievement (Tennent, 1971). Bloom (1964) considers general school achievement as a relatively stable characteristic that develops quickly during the early school years, and the inadequate intellectual development of students may be attributed in part to inappropriate schooling programs.

18. These results indicate that promotion policies based on the academic performance of a pupil fail to consider the wide complex of the interactive variables in the educational process. Academic performance is only one component of the learning process which is one of many elements of the school environment which is one of many determinants of achievement which is the least to say, one of many predictors of future success. Within this structure, repetition, even in an ideal case where a pupil is successfully re-exposed to the same body of knowledge and given another full year to assimilate

this knowledge without any side effects, tends to use the same treatment that resulted in low achievement without considering the other determinants. Similarly, automatic promotion, unaccompanied by supplementary action, although not penalizing a pupil for a low achievement, fails to improve the conditions for success.

Criteria for Promotion

19. Promotion decisions are, by and large, dependent upon the availability of valid measures to establish the "pass" level and/or the proportion of pupils who shall be allowed to be promoted to the next grade. A survey of regulations governing promotion (IBE, 1971) confirmed the well-known fact that countries practicing repetition rely on either reports given by teachers in the course of the year, or end-of-year examinations, or a combination of both. This system of measurement has weaknesses in its coverage, nature, and implementation.

20. Tests prepared by classroom teachers and examining boards or standardized tests used for promotion purposes, generally measure factual knowledge of information, occasionally understanding and application of knowledge, but rarely high cognitive processes such as abstract reasoning, creativity and problem-solving. Moreover, such tests ignore effective and social goals of education, which are considered a major component of educational objectives. For instance a UNESCO Meeting of Experts on Curriculum for the first stage of Education identified general objectives for primary level in developing countries in terms of (a) learning to learn, (b) communication, (c) values of society, (d) personality development, (e) participation in a variety of activities, and (f) health and hygiene. (Hawes, 1972). A major recommendation of the Commission on Primary Education for the 1968 Conference on Education in Nairobi was that African governments should ensure that primary

education contribute to national unity, social and cultural integration of children in the community, and change and economic and social development (Kiros et al, 1975). Similarly, El-Koussy (1973) states that the objectives of education for the Arab World need to be "to produce citizens who are ...resourceful, adaptable, adaptive, responsible, realistic, efficient, enthusiastic, effective, and conscious of their problems and the way out of them." In addition there is experimental evidence supporting the view that "generalization of cognitive ability results not only from the transfer of specific skill but also from the effects of such noncognitive factors as the establishment of learning styles, learning sets, motivation for learning and attitudes about learning." (Averch et al., 1974). Therefore tests, even when properly used and interpreted, measure a very limited number of educational outcomes, and consequently their results do not justify the determination of educational success and failure.

21. Even within the limited domain of cognitive achievement there is a number of liabilities and hazards in the very nature of testing. The major issue is test validity, i.e., "Do the tests on which promotion decisions are made, measure what they are supposed to measure?" Studies have shown that teacher-made tests are extremely inconsistent, and teachers do not correlate with each other in grades assigned to same students. (Cronbach, 1970). "Teacher grades are greatly influenced by student characteristics not associated with cognitive performance". (Averch, et al., 1974). Standardized tests also, which have limited use in developing countries, fail the criterion of validity. Klein (1971) points out several cases in which test items do not contribute to what the test claims to measure, and Bormuth (1970) indicates that the item generation techniques employed lead to tests of low validity.

The UCLA Center for the Study of Evaluation, after reviewing 1,500 standardized tests used at the primary level reported that the tests were unsatisfactory in almost every respect (Hoeptner, 1970). Other studies have further indicated that achievement test performance does not always reflect the amount learned (Rist, 1970) and is thus only incidentally related to learning (Kohl, 1967).

22. The problem is further compounded by the well-known and bitter facts about the conventional administration and use of examinations. Tests are usually constructed in a non-structured fashion, weighted haphazardly, and corrected under pressure of time and fluid criteria. The whole atmosphere is that of strain and fear which drives parents and pupils to try to do anything to pass the examination. Moreover, the results are interpreted to reflect student performance with no reference to school conditions, teacher effectiveness or appropriateness of curricula.

23. To sum up, "the numerous national and international seminars and conferences have shown that there is not a single psychologist or educationist ... who did not agree that marks are questionable. Yet the future of pupils continues to be decided by means of this dubious method. Why then be astonished by the extent of wastage?" (IBE, 1971).

Comparative Effects of Promotion Practices on Achievement

24. A large number of studies have been conducted to test the effects of promotion practices on achievement, scholastic standards and class homogeneity. Some of these studies attempted to test the assumption that repetition of a grade significantly increases the achievement level of the repeater. The results of a survey conducted by the Bangkok Institute for Child Study in 1966 of 25,000 school children concluded that repetition of grades appeared to hold no advantage in raising achievement levels (Phillips, 1975). Reinherz and Griffin (1971) found also that retention in the earlier grades did not improve achievement or progress scores of repeaters. Similar results were reported by Coffield and Bloomers (1956) and Briggs (1966). Other studies (for example, Allison, 1959; Lodbell, 1954; Steadman, 1959; Kowitz and Armstrong, 1961) support the view that retention improves school achievement. The conflict in results arises from the designs of these studies that fail to compare the effects of grade retention with those of promotion, and therefore, do not give any indication of how well the same retained children would have done had they been promoted, or how promoted pupils would have achieved had they been retained.

25. To avoid this weakness, several researchers studied the comparative effects of retention and promotion either by comparing classes operating under the two schemes or by studying matched groups of pupils some of whom were arbitrarily promoted while others were retained. Saunders (1941) reviewed early studies of this kind and reached the following conclusion: "Children do not appear to learn more by repeating a grade but experience a less growth in subject-matter achievement than they do when promoted." Kamii and Weikart (1963) investigated the effect of non-promotion on the achievement levels of

those who were retained. The sample consisted of 31 seventh graders who had been retained only once in their elementary school education, and an equal number of comparable seventh graders who had not been retained at all. Scores of intelligence and achievement of the retained group were consistently lower than the respective scores of the regularly promoted children. On the whole, the retained group achieved less in seven years than what the regularly promoted group achieved in six years. Chan-ky (1964) in order to study whether retention accomplishes its aim of increasing achievement levels, promoted a sample of 30 children to grade 2 while 33 other children were retained in grade 1. All children were pre- and post-tested on vocabulary, reading comprehension, and arithmetic achievement. The promoted group had significantly greater gains than did the retained group. No differences in arithmetic achievement gains were detected between the two groups. Initially both groups had been classified as slow learners, and by the end of the experiment both groups were still underachievers. Dobbs and Neville (1967) also investigated the effects of non-promotion on the achievement of once-retained first graders as compared to never-retained second graders. Thirty pairs of children were matched by race, sex, socio-economic level, type of classroom assignment, age, mental ability, and reading achievement. The analysis of variance, using three reading and three arithmetic scores, showed that in both cases the achievement of the promoted group was significantly greater than that of the retained group. The long- and short-term effects of first and second grade retention were examined in a study conducted in an urban school of approximately 7,000 students in the U.S. (Abidin, Golladay, and Howerton, 1971). The sample consisted of all promoted and retained sixth graders, and the data included measures of academic achievement. The retained group's marks

in reading and in mathematics were significantly lower the year they were retained than in the previous year. The long-term effects of retention displayed a continuing deterioration in both achievement and intelligence scores through the sixth grade. Koons (1977) also reported that regularly promoted low-achieving pupils scored higher on achievement tests than other similar retained pupils after they had spent a year in a given grade. Similar results were reported by Boyle (1962) who had reviewed the related literature and concluded that non-promoted children tended to make poor progress, and that they did less well than slow learners who were promoted.

26. Jackson (1975) identified three studies by Cook (1941), Farley (1936) and Klene and Branson (1929) that used an experimental design to investigate the effects of the retention and promotion treatments. He then isolated all the tested statistical relationships between a condition of grade promotion or retention and academic achievement. The results of these analyses are shown in Table III. Jackson, on the basis of these studies and 27 others that compared the outcomes of retained students before and after retention, or in comparison with students promoted under normal policies, concluded that "there is no reliable body of evidence to indicate that grade retention is more beneficial than grade promotion for students with serious academic or adjustment difficulties."

Table III

Results of Studies Comparing Experimentally Promoted and Retained Pupils

Type of Result	Number of Times Results Occurred: Achievement
(a) Statistically significant difference favoring promoted pupils	1
(b) Non statistically significant difference favoring promoted pupils	17
(c) No difference between promoted and retained pupils	0
(d) Non statistically significant difference favoring retained pupils	22
(e) Statistically significant difference favoring retained pupils	0

Source: Jackson (1975)

27. A number of studies also showed that repetition does not remedy the problem of low achievement and, consequently, does not contribute to future improvement. In a study of academic achievement in Tunisia, Simmons and Askoy (1972) found that the number of grades repeated at school had a significant and negative effect on achievement, i.e., "repeated failure at school can have a disincentive effect on learning." Carnoy and Thias (1974) also in examining the determinants of achievement at the secondary level in Tunisia, found that one of the variables consistently significant across most grades of secondary schools (with a negative effect) was years repeated at primary school. Similarly, Fuller and Chantavanich found in Thailand that non-repetition is one of the most important variables influencing scholastic achievement on the national level.

28. The hypothesis that achievement standards are better maintained under conditions of non-promotion practices was the subject of some studies. Coffield and Bloomers (1956) found non-promotion was more likely to lower standards than to raise them. A longitudinal study by Hall and Demarest (1958) of the performance of 20,000 children over a period of ten years revealed that regular promotion which kept children with their own age group did not result in lowering academic achievement. In evaluating the threat of failure on pupils' academic achievement, Smith (1963) reviewed the literature and reported that (a) children who were told at the beginning of the semester that they would all be promoted did as well on a comprehensive achievement test at the end of the semester as did children who throughout the semester were continually reminded that they had to do well in order to be promoted, and (b) upon a ten years observation of the fourth and sixth graders of a school district, it was noticed that an automatic promotion policy did not result in lowering academic achievement levels. Otto and Melby (1935) also conducted a study with pupils of 18 classrooms in northern Illinois to study the threat of failure in elementary education. The experimental group was told at the beginning of the semester that they would all be promoted to the higher grade the following term. The control group was told at the beginning of the semester and several times during the semester that anyone who did not achieve well had to repeat the grade. Results revealed no significant difference between the achievement levels of the two groups at the end of the term. In Malaysia, after automatic promotion was introduced, teachers were asked to report the percentage of students not deserving to be promoted. The average repetition rate suggested was 10 percent which was much lower than the actual rate when retention was practiced. (Report of Malaysia, 1966)

29. A number of studies indicated that non-promotion does not contribute to a reduction in the range of abilities within school grades. Worth (1960) reported that a study in California showed that the uniformity of instructional groups in upper grades was not maintained by non-promotion in the primary grades. This result is in agreement with earlier studies such as that of Caswell (1933) who indicated that if all over-ageness were immediately eliminated by reorganizing students into groups as if they had been regularly promoted, the average achievement and variability of mental age of each class would be little affected. Moreover, a study of the flow of a cohort of pupils in a system practicing nonpromotion, clearly shows that after repeaters are left behind at each grade level new repeaters appear at each consecutive year. For example, the history of a reconstructed cohort in Lebanon (Antoun and Abu-Rujeili, 1975) shows that after 19 percent of the cohort entering first grade are left behind as repeaters, 21 percent of those promoted to second grade repeat. Another 21 percent of those that make it to the third grade repeat, and further 21 percent repeat the fourth grade, 12 percent the fifth grade and 11 percent the sixth grade. In other words, repetition in the early grades does not screen low-achievers, but a rather significant proportion of new repeaters appears in later grades.

Comparative Effects of Promotion Practice on Personal-Social Adjustment

30. Along with research investigating the cognitive effects of the different promotion practices, a number of studies have been directed to the social and adjustment effects. Leviton (1975), on the basis of a review of literature focussing on self-concept and achievement, found that "research evidence seems to support the position of a relationship between self-concept and academic achievement." White and Howard (1973) studied the relationship between the failure to be promoted and the development of a negative self-concept among a sample of 624 sixth graders in North Carolina. Subjects were classified according to the number of times they had to repeat a grade, and the dependent variable consisted of their performance scores on a self-concept scale. Analysis of the data indicated that failure to be promoted was associated with a negative self-concept of the elementary school children. Berry (1974) compared two matched samples of an at-least-once-retained group versus regularly promoted students. All students were selected from an urban school district. All 160 students were given an intelligence test and a check list to assess their self-concept and need variables. The data indicated that on all of the self-concept variables, with the exception of self-confidence and self-control, there were significant differences between the two groups with the promoted students measuring higher on the variables related to positive self-esteem. Chase (1968), on the other hand, examined the effects of grade retention on a group of elementary school children who were retained in their grade level because they were judged to be emotionally and socially less mature than other children. The sample consisted of 65 children who were enrolled in ten

schools in Columbus, Ohio. The results indicated that repetition of a grade engenders no negative social or emotional effects in the child whose school failure was based primarily on social and emotional immaturity for the grade in which he had been placed.

31. Non-promotion practices usually result with overaged children repeating a certain grade. Morrison and Perry (1965) investigated whether overaged children were negatively affected by a low degree of social acceptance. A sample of 21 overage children were selected from a sample of 177 fifth and sixth grade children in a suburban area of central California. Results indicated that overage children were not well accepted by their peers. Another sample of 56 children in grades 4 through 6 were also considered for investigation, and the results reaffirmed the finding that overage children had little opportunity for social acceptance. Thus, it seems that overage children are at an educational disadvantage of achieving recognition from either their teachers or their peers. Effects upon students' self-esteem has also been a consequence of school tracking as a result of low academic achievement (Kelly, 1975).

32. Goodlad (1954) investigated the personal and social adjustment effects of non-promotion of elementary school children. Two matched samples of promoted and retained children were selected for the study from eleven elementary schools. The California Test of Personality was administered to all children. Thirteen out of twenty items discriminated in favor of the promoted group. Other socio-economic data also favored the promoted group. The promoted children tended to be more accepted as friends. Throughout the academic year the social adjustment of the retained group declined while that of the promoted group improved. The study supported the general conclusion that differences in peer-group relationships favored the promoted

group. Of the retained group, some were worried over their school progress, others were insecure in their home relationships, and certain children were having difficulty in balancing between experiences of success and failure.

33. Repetition of a grade causes attitudinal changes in pupils and parents. Russell (1952) investigated the influence of repetition of a grade on the attitudes of the retained children and their parents toward school. The sample was seleced from suburban schools in central and northern California. Fifth and eighth grade students and their parents participated in the study by responding to questionnaires. The results indicated that (a) the retained children, more than the promoted children, have positive attitudes toward out-of-school activities, and (b) both retained students and their parents expressed less favorable attitudes toward school than did regularly promoted pupils and their parents. Glasser (1969) who rejects "the philosophy in which children are taught how to succeed by failing them", questions the advantage, if any, of making 7-to-11 year olds convinced that they are failures, especially when the criteria of non-promotion is so unreliable.

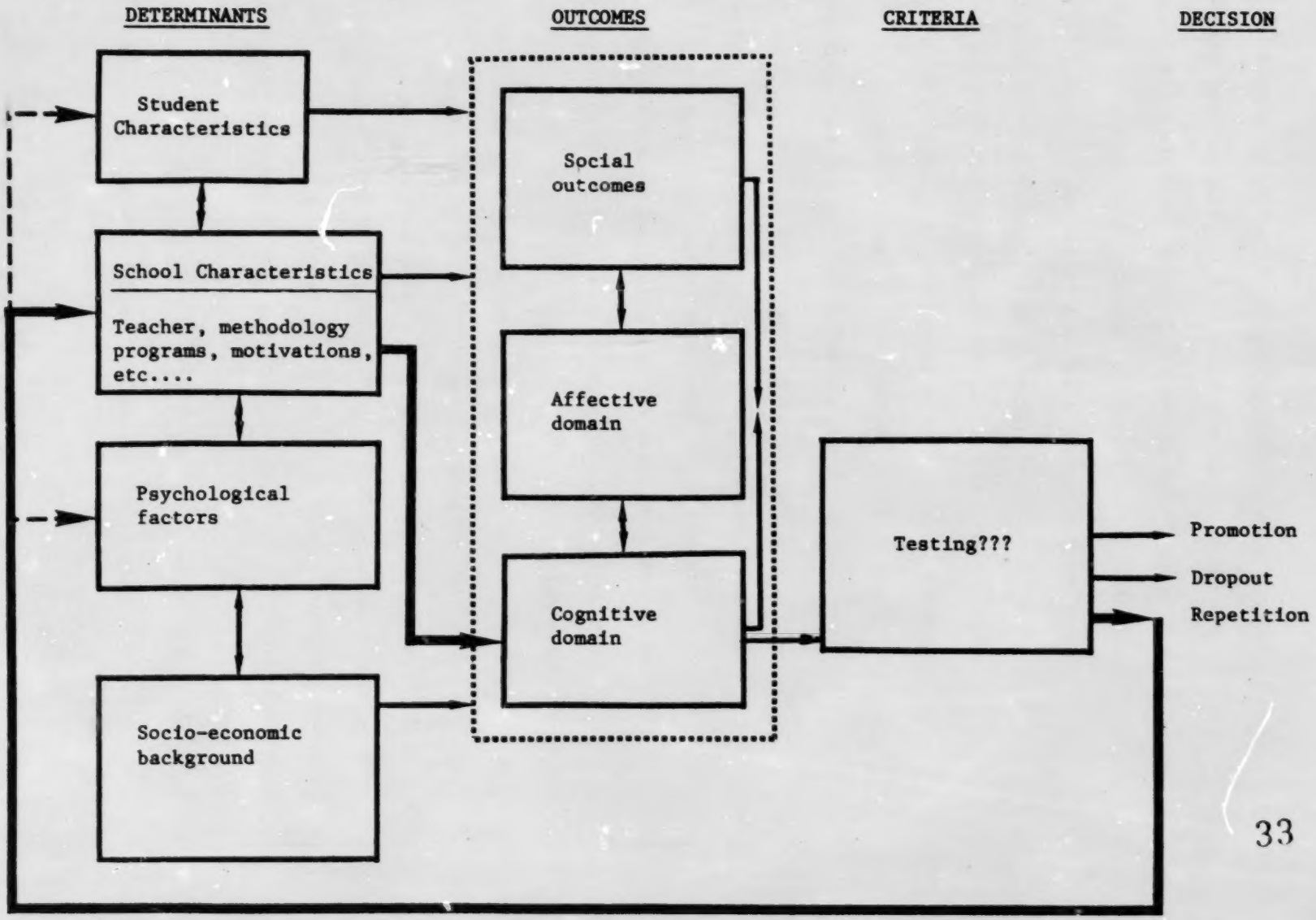
Conclusion and Educational Implications

34. Repetition is considered wasteful, educationally and economically, since it (a) limits the intake capacity of a system, (b) lowers the degree of internal efficiency (input-output ratio), (c) contributes to dropout, (d) negatively effects equitability of distribution of educational opportunities, and (e) increases education costs. In spite of this, repetition is regarded by systems that practice it as an appropriate investment in pupil recovery, justified by assumptions that (a) the determinants of achievement and failure are academic, (b) a pupil's level of achievement can be accurately determined, (c) repetition improves achievement, and (d) retention provides a better affective environment for the low-achievers.

35. Research findings challenged seriously and consistently these assumptions and the linear causal model they generate, (depicted schematically in Figure 1 by bold arrows). Instead, a synthesis of results leads to a multi-dimensional interactive matrix of variables that describe the dynamics of success and failure (Figure 1). In specific, the following conclusions can be made:

(a) Achievement is influenced by a variety of school-related and out-of-school factors. While school-related variables are weak and not consistently important, out-of-school variables and personal pupil characteristics are consistently significant predictors of achievement. Similarly, failure is caused by factors in the school environment, such as school policy, programs and teachers, as well as by the pupil's socioeconomic background, and his personal characteristics and psychological structure.

FIGURE 1. CAUSAL MODEL OF THE EDUCATIONAL PROCESS



(b) Promotion decisions are limited to attempted measures of cognitive performance while educational objectives are much broader. Even within such limitation, tests do not provide a valid and reliable criterion to establish the level of knowledge of a pupil or the proportion of pupils that deserve to pass or fail.

(c) There is no evidence that grade retention is more effective than grade promotion. On the contrary, when groups under the two practice are compared promoted pupils usually do better, but both continue to be low achievers. Moreover neither repetition practices lead to better academic standards nor automatic promotion leads to a lowering of such standards. Finally, grade retention does not improve the degree of homogeneity within grades.

(d) Grade retention, not only does it not result in pupil recovery, but has certain negative effects on a pupil's self-concept, attitude towards learning, peer-relation as well as attitudes of parents of repeaters.

36. Other things being equal, promotion seems to be as desirable, if not more desirable than retention. However, automatic promotion does not change a pupil's rate of learning, improve his chances of success, or remedy the para-academic causes of failure. Promoting a child to a task beyond his comprehension could be as harzardous to his development as repetition. Moreover, a comparison of the effects of promotion policies is generally based on matching of means, and a generalization to extreme cases of low achievement may not be justified. Similarly, conclusions may need to be modified as a function of the nature of subject-matter, where, for instance, knowledge is highly structured and rigidly sequential.

37. "To promote or not promote," therefore, is not the question. The real issue is how to improve the level of low achievers, and ultimately how to prevent failure. The original objectives hoped to be fulfilled by repetition, namely, achievement, motivation, improved grade homogeneity, high academic standards, etc. are still valid educational concerns that need to be tackled by the development of an educational strategy based on a new set of assumptions derived from available research evidence.

38. The first element in such a strategy is a re-definition of curriculum in terms of schooling years. The division of the teaching/learning process into units of one year duration called grades that have to be passed in bulk is an arbitrary decision. Since learning is a continuous process and does not occur in discrete steps, it is more realistic to break the curriculum into smaller units approaching a continuum. Then threshold levels of achievement may be defined in a sequential pattern, the feedback circuit will be short and manageable, and repetition, if necessary, becomes purposeful and efficient. Structurally, this strategy leads to the concept of non-graded curriculum. A number of studies investigating the effects of non-gradedness on achievement revealed consistently that non-graded programs were more beneficial in terms of pupil attainment than graded programs. (Morris et al., 1971; Brody, 1970; Ramayya, 1972; Engel and Cooper, 1971).

39. The second component in this strategy accommodates the fact that achievement is not solely dependent upon the exposure of a pupil to a set of school experiences but is highly determined by background characteristics of the learners. This implies that different learners need different amounts of time to achieve a constant degree of learning. Moreover, the degree of

effectiveness of teaching methods influences the amount of time needed to learn a concept. On the basis of Carroll's model (1963) that

$$\text{Degree of learning} = f\left(\frac{\text{time actually spent}}{\text{time needed}}\right)$$

it can be seen that the attainment of a certain level of achievement requires different actual amounts of time from different types of learners and under different teaching conditions. Bugelski (1962) in studying presentative time per trial in relation to total learning time concluded that time, rather than the number of trials, is a significant variable. Jester and Travers (1967) found also that a second presentation hardly results in any gain in comprehension, and that maximum learning occurs when the rate of presentation approaches the optimum rate required by the learner. Similarly, Kress and Gropper (1966) found that the best student performance takes place when characteristically fast pupils work under a fast fixed tempo, and characteristically slow pupils work under a slow fixed tempo. In addition Rodgers (1968 and 1969) showed that instructional methods affect learning rates, in the sense that "pupils with different operative rate patterns will show different achievement outcomes when exposed to different modes of presentation." This implies a policy of a differential tempo of teaching for pupils with different ranges of ability. If we assume that levels of achievement through the primary cycle could be predicted with a reasonable degree of accuracy in the first grade, as shown by Payne (1964), then students may be grouped by characteristic rates of learning (in a flexible manner) and taught with different tempos. In other words, for most pupils the primary curriculum will spread over an average period of six years, for a small percentage it

will spread over 4-5 years and for another small percentage it will extend over a period of 7-8 years. In such a case the inefficiency index as defined in para. 4 will remain close to 1. A number of studies have shown that such an approach is effective in aiding low achievers. (Hall and Findley, 1971; Cotter, 1967; Estes, 1973)

40. This strategy calls for a new role for educational measurement based on a broad and well defined spectrum of educational objectives covering the cognitive, affective and social dimensions. Consequently, different measurement techniques need to be developed to correspond to these domains. The results will then be used not so much as to determine the fate of the pupil but rather to estimate the rate of learning, and diagnose the effectiveness of instructional methods and the appropriateness of materials, with a feedback mechanism to introduce improvements wherever needed.

41. It is however recognized that many national educational authorities will continue to adhere to an educational framework of graded curricula and single-tracked structures, and to a system of selection and promotion governed by examinations and marks. While maintaining such an educational policy, a number of improvements can be introduced:

(a) Promotion policies need to be carefully examined, and wherever repetition rates are unreasonably high they may be reduced to a small fixed percentage particularly in the early grades of the primary cycle. This can be achieved either by controlling entrance to each level or by modifying the promotion standards (which are set arbitrarily anyway) to reflect the actual abilities of the pupils. This does not necessarily mean a lowering of attainment standards. "Age averages of attainment, however, appear to have

risen over the past two decades in such basic skills as reading, in those countries that have been developing an almost automatic system of promotion in the primary school." (IBE, 1971)

(b) Repeaters may be grouped in a special program with appropriate curriculum and instructional materials and methods. Such an approach is reported by Bundarnyj (1966) and quoted by IBE (1971) in which experimental classes were opened for repeaters in Moscow and Leningrad. An attempt was made to introduce the material of the next grade while proceeding with the remedial work of the repeated grade. "The study argued that a conditional transfer of a weak pupil to the next grade might be justified if help were given by the teacher and the other pupils to bring studies up to standard."

(c) Since the quality of the school environment is a factor in achievement, any improvement in this domain tends to reduce repetition. For instance, Jamison (1977) found that exposure to a mathematics radio program in Nicaragua more than compensated for a pupil's socio-economic background and decreased the probability of failure. Undoubtedly the decisive element is appropriate training of teachers since conventional training programs have produced teachers that "do not accept responsibility even for the failure of normal children". (Schiefelbein, 1975). Training programs need to enhance an awareness in the teachers of the pupils' social, personal and cognitive adjustment to the educational environment, a professional sensing of the weakness of pupils, and a competence in evaluation for diagnostic purposes.

Economic Implications

42. A reduction in repetition rate and consequently, dropout rate, leads to a comparable reduction in wastage ratio and consequently costs per graduate. Annex III (Table 1) taken from a study by UNESCO (Berstecher, 1970) shows how a joint reduction of both repetition and dropout rates leads to a considerable reduction in costs. The final costs are however affected by cost implications of the remedial measures taken to reduce wastage. The UNESCO simulation model considered the economic inplications of three types of strategies:

(a) A cost-neutral strategy includes such measures as automatic promotion, revision of examination standards, selective lowering of standards, redistribution of teachers to entrance grades, etc.... The cost implications appear in Table 1 of Annex III.

(b) A medium-cost strategy includes complementary non-graded forms of instruction, more and better teaching materials, curriculum revision, better health services, etc... The costs implied in this strategy are not very high, since even a 100% increase in these expenditures will hardly affect the primary education budget. Cost implications appear in Table 2 of Annex III where it can be seen that even with a 32% increase in annual unit cost, costs per graduate decrease to 63%.

(c) A cost-intensive strategy consists of measures that involve major structural changes in which the annual unit cost is assumed to be increased by a maximum of 64% (Table 3 of Annex III). Even under this strategy, there is a considerable reduction in costs per graduate with a lower limit of 78%.

43. It seems both reasonable and productive to devote, under these circumstances, a small proportion of the amount wasted due to repetition, to evaluate such strategies and consequently to design a feasible system suitable to the particular educational and economic conditions of the country concerned.

Annex I

RATE OF REPETITION FOR SELECTED COUNTRIES

Country	Year	Grade in first cycle					
		1	2	3	4	5	6
Asia							
Burma	1973	25	20	19	18	15	-
India	1970	26	20	18	17	16	-
Indonesia	1975	16	11	11	9	7	2
Korea	1975	-	-	-	-	-	-
Malaysia	1974	-	-	-	-	-	-
Papua & New Guinea	1972	74	3	2	2	1	2
Singapore	1974	-	-	3	4	4	27
Sri Lanka	1976	14	12	12	12	18	-
Thailand	1975	19	12	11	4	7	4
EMENA							
Algeria	1975	7	9	13	12	13	21
Egypt	1974	-	14	-	15	-	13
Greece	1973	8	5	4	2	2	1
Iran	1970	11	11	8	7	7	9
Iraq	1973	20	16	13	17	32	18
Jordan	1974	-	-	7	8	7	4
Kuwait	1974	14	15	16	12	-	-
Morocco	1975	23	20	26	30	44	-
Oman	1974	6	9	12	8	7	4
Saudi Arabia	1974	17	13	14	22	15	9
Syria	1974	12	12	10	9	7	8
Tunisia	1975	11	13	14	14	19	41
Yugoslavia	1973	7	5	4	3	7	7

Annex I

RATE OF REPETITION FOR SELECTED COUNTRIES

Country	Year	Grade in first cycle					
		1	2	3	4	5	6
Latin America*							
Argentina	1975	21	12	10	6	5	3
Brazil	1974	24	17	11	10	12	11
Chile	1974	19	15	13	10	9	8
Colombia	1974	20	16	13	11	8	-
Costa Rica	1975	-	13	14	-	8	3
Dom. Rep	1970	33	21	18	13	10	6
Ecuador	1973	17	14	11	11	10	9
El Salvador	1974	14	9	6	5	3	2
Guatemala	1972	26	14	12	7	5	2
Guyana	1973	18	7	7	6	8	14
Mexico	1965	22	14	13	11	9	4
Nicaragua	1973	16	11	9	8	6	3
Panama	1974	21	18	15	9	7	3
Paraguay	1974	25	20	16	11	7	3
Peru	1975	15	12	9	8	7	4
Uruguay	1973	30	18	16	14	13	7
Venezuela	1974	-	-	-	10	9	-

* Schiefelbein concludes in a study of repetition in Latin America that the published (official) repeater rates are only about half the size of the real repeater rates (Schiefelbein, 1975).

Annex I

RATE OF REPETITION FOR SELECTED COUNTRIES

Country	Year	Grade in first cycle					
		1	2	3	4	5	6
Eastern Africa							
Botswana	1975	-	-	-	-		
Burundi	1974	19	18	25	26	31	39
Kenya	1975	5	3	4	5	4	7
Lesotho	1975	9	4	4	3	3	3
Madagascar	1973	24	15	14	15	10	16
Malawi	1974	19	17	15	12	10	13
Rwanda	1974	27	18	17	21	18	24
Somalia	1974	-	-	-	-	-	-
Sudan	1971	-	-	4	4	3	9
Swaziland	1975	9	6	8	11	11	11
Tanzania	1971	1	1	1	3	-	-
Zaire	1971	27	24	23	19	19	18
Zambia	1974	-	1	1	4	1	1
Western Africa							
Benin	1974	17	16	20	19	27	36
Cameroon	1973	32	24	25	20	23	35
C.A.E.	1974	32	37	24	26	29	36
Chad	1975	41	34	32	28	32	57
Congo	1974	32	26	31	26	25	34
Gabon	1974	50	33	29	21	21	23
Gambia	1975	7	4	4	5	6	35
Ghana	1975	5	2	2	2	1	1
Ivory Coast	1973	21	21	22	21	27	46
Mali	1970	25	23	27	23	29	37
Niger	1974	8	13	17	15	19	36
Senegal	1972	11	14	15	16	18	34
Togo	1975	37	24	26	20	25	34
Upper Volta	1974	14	12	14	14	19	36

Annex II

CAUSES OF NON-PROMOTION

The following list of the causes of non-promotion of elementary school children in various research studies was reported by Saunders.

I. Insufficient Achievement

Previous preparation or in keeping abreast of the class

II. Inadequate Mentality

A. Sluggish mentality or mental incapacity

B. Lack of ability

III. Insufficient Attendance

A. Truancy

B. National and religious holidays

IV. Imperfect Health

A. Physical defects

B. Ill health

C. Faulty eyesight or hearing

D. Diseased adenoids

E. Inadequate diet

F. Undernourishment

G. Nervousness

H. Poor muscular coordination

V. Out-of-school Causes

A. Late entrance to school

B. Ignorance of the English language, poor home conditions, poor home study habits, and outside activities

C. Domestic trouble

D. Moving about

Annex II

VI. Lack of Emotional Stability

- A. Timidity
- B. Immaturity
- C. Uneven temperament
- D. Poor attitude
- E. Dislike of subject
- F. Dislike of the teacher
- G. Dislike of the school

VII. Inappropriate Administrative Practices

- A. Carelessness and indifferences of the pupils
- B. Lack of interest and application
- C. Poor school study habits
- D. Overwork of pupils
- E. Double promotions
- F. Too frequent tranfers
- G. Excessive size of classes and over-large registers
- H. Unsatisfactory textbooks
- I. Double-session programs
- J. Insufficient school time
- K. Delayed examinations
- L. Too high standards or varying standards of rating pupils
- M. Teachers' subjective judgments
- N. Full-time special schedule
- O. Lack of balance in teaching strength of the grades

Annex II

P. Inadequate number of substitute teachers

Q. Inefficient teaching

R. Uniform courses of study

S. Failure to provide financial resources to fill normal vacancies speedily

---

Source: Saunders (1941)

SIMULATED COSTING OF EDUCATIONAL WASTAGE

Comprehensive simulation table 1: the cost-neutral strategy

	(1) r	(2) d	(3) annual unit costs	in %	(4) total real input	in %	(5) Output	in %	(6) Total Costs	in %	(7) Costs per graduate	in %	(8) W
Status Quo	40	8	100	100.0	5448	100.0	651	100.0	544,800	100.0	836,9	100.0	2.10
	35	7	100	100.0	5229	96.0	710	109.1	522,900	96.0	736,5	88.0	1.84
	30	6	100	100.0	5019	92.1	764	117.4	501,900	92.1	656,9	78.5	1.64
	25	5	100	100.0	4822	88.5	815	125.2	482,200	88.5	591,7	70.7	1.48
	20	4	100	100.0	4637	85.1	858	131.8	463,700	85.1	540,4	64.6	1.35
	15	3	100	100.0	4462	81.9	898	138.0	446,200	81.9	496,9	59.4	1.24
	10	2	100	100.0	4298	78.9	935	143.6	429,800	78.9	459,7	55.0	1.15
	5	1	100	100.0	4146	76.1	969	148.9	414,600	76.1	427,9	51.1	1.07
	0	0	100	100.0	4000	73.4	1000	153.6	400,000	73.4	400,0	47.8	1.00

Area of Inefficiency ⟶

17

18

SIMULATED COSTING OF EDUCATIONAL WASTAGE

Comprehensive simulation table 2: the medium-cost strategy

	(1) r	(2) d	(3) annual unit costs	in %	(4) total real input	in %	(5) Output	in %	(6) Total Costs	in %	(7) Costs per graduate	in %	(8) W
Status Quo	40	8	100	100.0	5448	100.0	651	100.0	544,800	100.0	836,9	100.0	2.10
	35	7	104	104.0	5229	96.0	710	109.1	543,800	99.8	765,9	91.5	1.84
	30	6	108	108.0	5019	92.1	764	117.4	542,000	99.5	709,4	84.8	1.64
	25	5	112	112.0	4822	88.5	815	125.2	540,000	99.1	662,6	79.2	1.48
	20	4	116	116.0	4637	85.1	858	131.8	537,900	98.7	626,9	74.9	1.35
Area of Inefficiency →	15	3	120	120.0	4462	81.9	898	138.0	535,400	98.3	596,2	71.2	1.24
	10	2	124	124.0	4298	78.9	935	143.6	533,000	97.8	570,0	68.1	1.15
	5	1	128	128.0	4146	76.1	969	148.9	530,700	97.4	547,7	65.4	1.07
	0	0	132	132.0	4000	73.4	1000	153.6	528,000	96.9	528,0	63.1	1.00

SIMULATED COSTING OF EDUCATIONAL WASTAGE

Comprehensive simulation table 3: the cost-intensive strategy

	(1) r	(2) d	(3) annual unit costs	(3) in %	(4) total real input	(4) in %	(5) Output	(5) in %	(6) total costs	(6) in %	(7) Costs per graduate	(7) in %	(8) W
Status Quo	40	8	100	100.0	5448	100.0	651	100.0	544,800	100.0	836,9	100.0	2.10
	35	7	108	108.0	5229	96.0	710	109.1	564,700	103.7	795,3	95.0	1.84
	30	6	116	116.0	5019	92.1	764	117.4	582,200	106.9	762,0	91.1	1.64
	25	5	124	124.0	4822	88.5	815	125.2	597,900	109.7	733,6	87.7	1.48
	20	4	132	132.0	4637	85.1	858	131.8	612,100	112.4	713,4	85.2	1.35
	15	3	140	140.0	4462	81.9	898	138.0	624,700	114.7	695,6	83.1	1.24
	10	2	148	148.0	4298	78.9	935	143.6	636,100	116.8	680,3	81.3	1.15
Area of Inefficiency	5	1	156	156.0	4146	76.1	969	148.9	646,800	118.7	667,5	79.8	1.07
	0	0	164	164.0	4000	73.4	1000	153.6	656,000	120.4	656,0	78.4	1.00

BIBLIOGRAPHY

1. Abidin, R. R., Golladay, W. M. and Howerton, A. L. "Elementary School Retention: An Unjustifiable, Discriminatory and Noxious Educational Policy" Journal of School Psychology, 1971, 9:4, 410-417.

2. Alexander, L. and Simmons, J. The Determinants of School Achievement in Developing Countries. Washington, D.C.: International Bank for Reconstruction and Development, Staff Working Paper No. 201, March 1975.

3. Allison, C. J. "Characteristics of Students Who Failed Grade Seven in Edmonton Junior High Schools, 1951-1952." Unpublished Master's Thesis, University of Alberta, 1959.

4. Antoun, J. and Abu-Rujeili, K., Outputs of the Educational System in Lebanon (In Arabic). Beirut: Center for Educational Research and Development, 1975.

5. Asbury, C. A. "Selected Factors Influencing Over - and Under - Achievement in Young School-Age Children" Review of Educational Research, 1974, 44:4, 409-427.

6. Averch, Harvey et al. How Effective Is Schooling. N.J.: The Rand Corporation, 1974.

7. Berg, Ivar. Education and Jobs: The Great Training Robbery. New York: Praeger, 1970.

8. Berry, L. "Self-Concept and Need Factors of Inner-City High School Adolescents and Dropouts" Child Study Journal, 1974, 4:1, 21-30.

9. Berstecher, D. Costing Educational Wastage: A Pilot Simulation Study. Paris: UNESCO, 1970.

10. Bloom, B. S. Stability and Change in Human Characteristics. New York: Wiley, 1964.

11. Bormuth, J. R. On the Theory of Achievement Test Items. Chicago: University of Chicago Press, 1970.

12. Boyle, B. "Promotion or Retention: Some Recent Research" Teachers College Journal, 1962, 34, 29-30.

13. Briggs, L. D. "The Impact of Failure on Elementary School Pupils" (Doctoral dissertation, North Texas University, 1966). Dissertation Abstracts, 1968, 27, 2719-A. (University Microfilms, No. 67-2571).

14. Brody, E. B. "Achievement of First - and Second - Year Pupils in Graded and Non-graded Classrooms" Elementary School Journal, 1970, 70, 391-4.

15. Brown, R. I. A Survey of Wastage Problems in Elementary Education. Bangkok: UNESCO Regional Office for Education in Asia, 1966.

16. Buckman, Ronald B. "Equality of Educational Opportunity in the Chilean Middle School" Ph.D. Dissertation, Syracuse University, 1971.

17. Bugelski, B. R. "Present Time, Total Time, and Mediation in Paired-Associate Learning" Journal of Experimental Psychology, 1962, 63 409-12.

18. Carnoy, M. and Thias, H. H. Draft Report of Second Tunisia Education Research Project. Washington, D. C.: I.B.R.D. RPO 248, 1974. Unpublished ms.

19. Carroll, J. "A Model of School Learning" Teachers College Record, 1963, 64, 723-33.

20. Caswell, H. L. "Non-promotion in Elementary Schools" Elementary School Journal, 1933, 33, 644-651.

21. Chansky, N. M. "Progress of Promoted and Repeating Grade 1 Failures" Journal of Experimental Education, 1964, 32, 225-237.

22. Chase, J. A. "Study of the Impact of Grade Retention on Primary School Children" Journal of Psychology, 1968, 70, 169-177.

23. Chowdhury, P. Report of an Investigation into the Problem of Wastage and Stagnation in Primary Schools in the District of 24-Parganas. Calcutta: Directorate of Education, 1965.

24. Clark, Bill. "Emotional Problems; A Major Factor in Retention" Southeastern Louisiana College Bulletin, January, 1959, 16, 17.

25. Coffield, W. H. and Bloomers, P. "Effects of Non-Promotion on Educational Achievement in the Elementary School" Journal of Educational Psychology, 1956, 47, 235-50.

26. Cohn, Elchanan. "Economics of Scale in Iowa High School Operations" Journal of Human Resources, Fall 1968, 3, 422-434.

27. Comber, L. C., and Keeves, John P. Science Education in Nineteen Countries, International Studies in Evaluation I. Stockholm: Almquist and Wiksell, 1973.

28. Cook, W. "Some Effects of the Maintenance of High Standards of Promotion" Elementary School Journal, 1941, 41, 430-437.

29. Cotter, K. "First-Grade Failure: Diagnosis, Treatment and Prevention" Childhood Education, Nov. 1967, 172-176.

30. Crescimbeni, Joseph, "Broken Homes Affect Academic Achievement" Education, March 1964, 437-441.

31. Cronback, L. J. Essentials of Psychological Testing. New York: Harper and Row, 1970.

32. Dobbs, V. and Neville, D. "Effect of Non-promotion on the Achievement of Groups Matched from Retained First Graders and Promoted Second graders" The Journal of Educational Research, 1967, 60, 472-475.

33. El Koussey, Abdel Aziz. "For a Self Criticism of Education in the Arab Countries" Prospects, UNESCO, 1973, 3, 1.

34. Ellinger, B. D. "Nonpromotion: A Review Essay" Theory into Practice, 1965, 4, 122-28.

35. Engel, B. M. and Cooper, M. "Academic Achievement and Nongradedness" Journal of Experimental Education, 1971, 40, 24-26.

36. Estes, G. "Grouping Should not Label Children" School and Community, 1973, 59, 54.

37. Farley, E. S. "Regarding Repeaters - Sad Effects of Failure Upon the Child" Nation's Schools, 1936, 18 (4), 37-39.

38. Fischer, Joseph "Factors Associated with College Aspirations and Expectation of Chilean Secondary School Pupils" Ph.D. Dissertation, The University of Chicago, 1971.

39. Fuller, William and Chantavanich, A. A Study of Primary Schooling in Thailand. Bangkok: Office of the National Education Commission, n.d.

40. Gintis, H. "Education, Technology and the Characteristics of Worker Productivity" The American Economic Review, 1971, 61, 266-269.

41. Glasser, W. "The Effect of School Failure on The Life of a Child" National Elementary Principal, 1969, 49:1, 8-18 and 49:2, 12-18.

42. Goodlad J. I. "Some Effects of Promotion and Nonpromotion upon the Social and Personal Adjustment of Children" Journal of Experimental Education, 1954, 22, 301-328.

43. Hall, M. M. and Findley, W. G., "Ability Grouping: Helpful or Harmful?" Phi Delta Kappan, 1971, 52, 556-7.

44. Hall, W. F., and Demarest R. "Effect on Achievement Scores of a Change in Promotional Policy" Elementary School Journal, January 1958, 58, 204-207.

45. Hawes, H. W. R. Planning the Primary School Curriculum in Developing Countries, Paris: UNESCO - IIEP, 1972.

46. Hoepfner, Ralph. CSE Elementary School Test Evaluation. Los Angeles: Center for the Study of Evaluation, UCLA Graduate School of Education, 1970.

47. Holtzman, W. H. "The Changing World of Mental Measurement and It's Social Significance" American Psychologist, 1971, 26, 546-553.

48. International Bureau of Education (IBE) (M. A. Brimes and L. Pauli). Wastage In Education; A World Problem. UNESCO: IBE, 1971.

49. International Bureau of Education (IBE). A Statistical Study of Wastage at School. UNESCO: IBE, 1972.

50. Jackson, G. B. "The Research Evidence on the Effects of Grade Retention" Review of Educational Research, 1975, 45, 613-635.

51. Jamison, Dean. Radio Education and Student Repetition in Nicaragua. I.B.R.D., 1977 (MS)

52. Jester, R. E., and Travers, R. M. W. "The Effect of Various Presentation Patterns on the Comprehension of Speeded Speech" American Educational Research Journal, 4:350-60, Nov. 1967.

53. Kamii, C. K. and Weikart, D. P. "Marks, Achievement, and Intelligence of Seventh Graders Who Were Retained (Nonpromoted) Once in Elementary School" The Journal of Educational Research, May-June 1963, 56, 9.

54. Kelly, Delos H. "Tracking and Its Impact Upon Self-Esteem: A Neglected Dimension" Education, 1975, 96, 2-8.

55. Kiros, Fassil, et al. Educational Outcome Measurement in Developing Countries. Public Service Laboratory, Georgetown University, Washington, D. C., 1975.

56. Kitch, D. E. "Does Retardation Cause Dropouts?" California Journal of Elementary Education, 1952, 21, 25-28.

57. Klein, S. P. "The Uses and Limitations of Standardized Tests in Meeting the Demands for Accountability" UCLA Evaluation Comment, Center for the Study of Evaluation, January 1971, 2, No.4.

58. Klene, V. and Branson, E. [Unknown title] In Education Research Bulletin of Los Angeles City Schools. [Unknown issue] Reported in The Elementary School Journal, 1929, 29, 564-566.

59. Knudsen, D. D. "An Investigation of the Social and Familial Relationships in the Life of the High School Dropout" Doctoral Dissertation, University of North Carolina, 1964.

60. Knudsen, D. D. and Thomas, S. "Some Social Factors to Consider in Non-Promotion" Theory Into Practice, 1965, 4, 99-102.

61. Kohl, H. 36 Children. N.Y.: New American Library, 1967.

62. Koons, C. L. "Nonpromotion: A Dead-End Road" Phi Delta Kappan, May 1977, 58, 701-702.

63. Kowitz, G. T. and Armstrong, C. M. "The Effect of Promotion Policy on Academic Achievement" Elementary School Journal, 1961, 61, 435-43.

64. Kress, G. C. and Gropper, G. L. "A Comparison of Two Strategies for Individualizing Fixed-Paced Programmed Instruction" American Educational Research Journal, 1966, 3, 273-80.

65. Lawyers' Committee for Civil Rights Under Law. A Study of State Legal Standards for the Provision of Public Education. Washington, D.C.: NIE, 1974.

66. Leviton, Harvey "The Implications of the Relationship between Self-Concept and Academic Achievement" Child Study Journal, 1975, 5, 25-33.

67. Levy, M. B. "Determinants of Primary School Dropouts in Developing Countries" Comparative Education Review, 1971, 15 44-58.

68. Lodbell, F. O. "Results of a Nonpromotion Policy in One School District" Elementary School Journal, 1954, 54, 333-37.

69. McClelland, David "Testing for Competence Rather Than for Intelligence" American Psychologist, January 1973, 1-14.

70. McClelland, D. C. "What is The Effect of Achievement Motivation Training in the School?" Teachers College Record, 1972, 74, 129-45.

71. Morris, V. R., et al. "Pupil Achievement in a Nongraded Primary Plan After Three and Five Years of Instruction" Educational Leadership, 1971, 28, 621-5.

72. Morrison, I. E. and Perry, I. F. "Acceptance of Overage Children by their Classmates" Elementary School Journal, 1956, 56, 217-20.

73. Otto, H. J. and Melby, E. "An Attempt to Evaluate the Threat of Failure" Elementary School Journal, 1935, 35, 588-596.

74. Payne, Arlene. "Early Prediction of Achievement" Administrator's Notebook, 1964, 13, (1).

75. Phillips, H. M. Basic Education-A World Challenge. New York: John Wiley & Sons, 1975.

76. Ramayya, D. P. "Achievement Skills, Personality Variables, and Classroom Climate in Graded and Nongraded Elementary School" Psychology in the Schools, 1972 9, 88-92.

77. Reinherz, H. and Griffin, C. L. The Treadmill of Failure. Quincy, Mass.: Authors, 1971.

78. "Report of Malaysia to the Technical Seminar on Educational Wastage and Dropout" Bangkok, 1966 (EDWAST/3: Malaysia, Unpublished ms.).

79. Rist, R. C. "Student Social Class and Teacher Expectations" Harvard Educational Review, 1970, 40, 411-451.

80. Rodgers, F. A. "Influence of Time Variations on Learning and Achievement" Educational Leadership, 1969, 27, 101+.

81. Rodgers, F. A. "Gain in Programmed and Flexible Presentations" The Elementary School Journal, 1968, 68, 312-24.

82. Russel, D. H. "Influence of Repetition of a Grade and of Regular Promotion on the Attitudes of Parents and Children Toward School" California Journal of Elementary Education, 1952, 21, 29-41.

83. Saunders, C. M. Promotion of Failure for the Elementary School Pupil? New York: Columbia University, 1941.

84. Schiefelbein, Ernesto. "Repeating: An Overlooked Problem of Latin American Education" Comparative Education Review, 1975, 468-487.

85. Simmons, John and Askoy, Sumru. "Schooling for Development? Students and Workers in Tunisia" Harvard University: Department of Economics, 1972, Unpublished ms.

86. Smith, L. T. "Everyone gets promoted: How Close Have We Come To Making This The Basis of Our Promotion Policies?" Overview, January 1963, 44-55.

87. Steadman, E. R. "Fifteen Who Were Not Promoted" The Elementary School Journal, 1959, 59, 271-276.

88. Stroup, A. L. and Robins, L. N. "Research Notes: Elementary School Predictors of High School Dropout Among Black Males" Sociology of Education, 1972, 45, 212-222.

89. Tennent, T. G. "School Non-Attendance and Delinquency" Educational Research, 1971, 13, 185-190.

90. Thomas, S. and Knudsen, D. D. "The Relationship Between Nonpromotion and the Dropout Problem" Theory Into Practice, 1965, 4, 90-4.

91. Thompson, Mary. "Retention Is Not a Dirty Word" Instructor, August 1976, 86, 324.

92. Thorndike, Robert. Reading Comprehension Education in Fifteen Countries. International Studies in Evaluation III. Stockholm: Almquist and Wiksell, 1973.

93. UNESCO, Development of School Enrollment: World and Regional Statistical Trends and Projections 1960-2000. International Conference on Education, 36th Session. Paris, 1977.

94. UNESCO Regional Office for Education in Asia, Final Report - Technical Seminar on Educational Wastage and School Dropout. Bangkok, 1967.

95. White, K. and Howard J. "Failure to be Promoted and Self-Concept Among Elementary School Children" Elementary School Guidance and Counseling, 1973, 7, 182-7.

96. Worth, W. H. "What Research Says About Promotions" Canadian Education, 1960, 15, 61-70.

RECENT PAPERS IN THIS SERIES

No.	TITLE OF PAPER	AUTHOR
290	Major Reforms of the Swedish Education System	A. Heidenheimer (consultant)
291	Industrialization, Technology and Employment - China	T. Rawski (consultant)
292	Development and Income Distribution - Zambia	C. Blitzer
293	World Potash Survey	W. Sheldrick, H. Stier
294	The Economic Dimensions of Malnutrition in Young Children	M. Selowsky
295	The Technology of Rural Development	J.P. McInerney (consultant)
296	The Financial Cost of Agricultural Credit: A Case Study of Indian Experience	C.D. Datey (consultant)
297	Agricultural Sector Planning Models: A Selected Summary and Critique	A.C. Egbert
298	Textbooks and Achievement: What We Know	S.P. Heyneman. J. Farrell, A. Sepulveda-Stuardo (consultants)
299	An Economic and Social Analysis of the Chao Phya Irrigation Improvement Project II	C. Bruce Y. Kimaro
300	Two-Studies of Development in Sub-Saharan Africa	S. Acharya B. Johnston (consultant)
301	The Intermediate Sector, Unemployment, and The Employment-Output Conflict: A Multi-Sector Model	W.F. Steel Y. Takagi (consultant)
302	The Economic Theory of the Household and Impact Measurement of Nutrition and Related Health Programs	D. Chernichovsky
303	Trade Restrictions and International Price Instability	M. Bale E. Lutz
304	Intergovernmental Fiscal Relations in Developing Countries	R. Bird (consultant)
305	A Programming Approach to Fertilizer Sector Planning	A. Choksi A. Meeraus
306	The Foreign Exchange Gap, Growth and Industrial Strategy in Turkey: 1973-1983	K. Dervis S. Robinson
307	The Importance of Risk in Agricultural Planning Models	P. Hazell, R. Norton M. Parthasarathy. C. Pomareda (consultant)

RECENT PAPERS IN THIS SERIES

No.	TITLE OF PAPER	AUTHOR
308	Guidelines for School Location Planning	W. Gould (consultant)
309	Growth and Poverty in Developing Countries	M. Ahluwalia, N. Carter H. Chenery
310	Teacher Training and Student Achievement in Less Developed Countries	T. Husen, L. Saha R. Noonan (consultants)
311	Optimum Economic Power Supply Reliability	M. Munasinghe M. Gellerson (consultant)
312	Intra-Industry Trade and the Integration of Developing Countries in the World Economy	B. Balassa
313	Export Promotion Policies	B. de Vries
314	The Changing Composition of Developing Country Exports	H. Chenery D. Keesing
315	Urban Growth and Economic Development in the Sahel: Prospects and Priorities	M. Cohen
316	World Trade and Output of Manufactures: Structural Trends and Developing Countries' Exports	D. Keesing
317	Cuba: Economic Change and Education Reform 1955-1974	M. Carnoy, J. Wertheim (consultants)
318	Sources of Fertility Decline: Factor Analysis of Inter-Country Data	R. Faruqee